SECTION

C-1 ITEM DESCRIPTION

ACR-M-001, Meal Cold Weather/Food Packet Long Range Patrol, Combined Ration, Assembly Requirements

The Meal, Cold Weather/Food Packet, Long Range Patrol provides an operational ration for two separate operational scenarios. The Meal, Cold Weather (MCW) is intended for cold weather feeding, it will not freeze and supplies extra drink mixes for countering dehydration during cold weather activities. It can be issued at three per day for complete cold weather ration. The Food Packet, Long Range Patrol (LRP) is a restricted calorie ration meant for special operations, where resupply is not available and weight and volume are critical factors. It is issued at one per soldier per day for up to ten days. The combined product assembly consists of twelve ration/meals packets per shipping container.

C-2 ASSEMBLY REQUIREMENTS

A. Components.

(1) Menu components. The components required for menu assembly shall be as specified in Table I.

TABLE I. Components

Component	Reference	Menu
Entrees		
Beef Stew	PCR-B-015, Style A or B	7
Beef Stroganoff with Noodles	PCR-B-016, Style A or B	2
Beef Teriyaki with Rice	PCR-B-017, Style A or B	9
Chicken and Rice	PCR-C-025, Style A or B	5
Chicken, Spicy Oriental with Rice	PCR-C-026, Style A or B	1
Egg, Scrambled	PCR-E-001, Style A or B	
Scrambled Eggs and Bacon Pieces	Type II	11
Scrambled Eggs with Cheese, Western Style	Type III	10, 12
Lasagna with Meat and Sauce	PCR-L-001, Style A or B	6
Pork, Sweet and Sour with Rice	PCR-P-010, Style A or B	3
Spaghetti with Meat Sauce	PCR-S-008, Style A or B	8
Turkey Tetrazinni	PCR-T-002, Style A or B	4
Starches		
Cereal, Wheat, Enriched Farina, Instant, Brown Sugar Cinnamon, Maple Brown Sugar, or Apple and Cinnamon	A-A-20108A, Type I, Style B, Flavor 2, 3 or 4, Package A or B	10 1/

TABLE I. Components (cont'd)

Component	Reference	Menu
Cereals, Rolled Oats, Instant, Apple and Cinnamon, Maple and Brown Sugar, Cinnamon and Spice, or Strawberries and Cream	A-A-20090B, Type II, Flavor B, C, E or F, Package A or B	11, 12 1/
Soup, Noodle, Ramen, Instant, Fried Noodle, Cup (Repacked to Pouch), Beef or Chicken	A-A-20297, Type I, Style A, Flavor 1 or 2, Package A or B	3, 5 1/
Snacks and Candy		
Cakes and Brownies, Shelf-Stable	PCR-C-007B, Package A or B	
Cakes: Vanilla, Lemon, Orange, Pineapple, Lemon Poppy Seed or Spice	Type I, Flavors 1, 2, 3, 4, 6 or 7	7 1/
Fudge Brownie with Chocolate Drops	Type II, Flavor 1, Style C	4, 12
Candy and Chocolate Confections	A-A-20177B, Package A or B	
Toffee Rolls, Chocolate Flavored	Type II	7
Chocolate Pan Coated Disks	Type VI, Flavor 1	8
Chocolate with Peanut Butter Pan Coated Disks	Type VI, Flavor 4	12
Starch Jelly Candy	Type VIII	2
Cheese Spread, Cheddar, Plain, with Jalapeno Peppers or with Bacon	MIL-C-595E, Type I, II or III, White or Tan Package	4 1/
Chocolate Sports Bar	PCR-C-004, White or Tan Package	2, 10
Cookies, Regular, Fig Bar, Soft and Chewy, Individual Serving	A-A-20295A, Type I, Style P, Bake Type b, Class 1, Package A or B	1, 11
Cookies, Regular, Shortbread, Plain, Crisp, Individual Serving	A-A-20295A, Type I, Style A, Flavor 1, Bake Type a, Class 1, Package A or B	6, 9
Cookies, Oatmeal, and Brownies, Chocolate Covered	MIL-C-44072C, Type II, White or Tan Package	5, 7
Crackers, Plain or Vegetable	MIL-C-44112D, Type I or II, White or Tan Package	1, 3, 4, 9 1/
Nut Raisin Mix	PCR-N-002, Style A or B	2, 6, 8, 11
Peanut Butter, Regular, Creamy, Stabilized, Grade A, Fortified	A-A-20328, Type I, Class 1, Texture A, Style 1, Grade A, Fortificat. b, Package A or B	1, 3, 9
Snack Foods, Filled Pretzels, Cheddar or Nacho Cheese	A-A-20195B Type II, Style F, Flavor 1 or 2, Package A or B	10 1/
Toaster Pastry, Regular, Unfrosted, Brown Sugar Cinnamon, Rectangular, Single Serving, Shelf Stable	A-A-20211A, Type I, Style A, Flavor C, Shape I, Servings a, Class 1, Package A or B	6, 8

TABLE I. Components (cont'd)

Component	Reference	Menu
Beverages		
Beverage Base, Powdered, Sweetened with Nutritive Sweetener	A-A-20098B, Type II, Package A or B	
Orange, Fortified with Vitamin Premix	Flavor 1, Fortification c	4, 5,10,11
Lemon, Lime, Lemon-Lime, Grape or Cherry, Fortified with Ascorbic Acid	Flavor 2, 3, 4, 5 or 6	1 1/
Cocoa Beverage Powder, Regular, Fortified	MIL-C-3031J, Type I, Class 1, White or Tan Package	2, 5, 8, 10, 11, 12
Coffees, Flavored, Instant, Powdered, Cappuccino, Regular, French Vanilla or Mocha	A-A-20336, Type II, Style A, Flavor 1 or 2, Package A or B	1, 3, 6 1/
Other		
Spoon, Fork, Knife and Spoon, Picnic, Plastic, High Impact, 7-inch, Brown	A-A-3109, Type 4, Item 13	All

1/ An equal quantity of at least three flavors of cakes (menu 7), two flavors of cream of wheat (menu 10), three flavors of oatmeal (menus 11, 12), two flavors of cheese (menu 4) two flavors of filled pretzels (menu 10), two flavors of soup (menu 3, 5), two flavors of crackers (menus 1, 3, 4, 9), three flavors of beverage base (menu 1) and two flavors of cappuccino (menus 1, 3, 6) will be procured and distributed in as uniform manner as possible.

(2) Accessory packet components. The components required for accessory packet assembly shall be as specified in Table II.

TABLE II. Accessory Packet Components

Component	Reference	Packet
Coffee, Instant, Freeze Dried, Regular	A-A-20184, Type III, Style A	All
Creamer, Non-Dairy, Dry	A-A-20043A	All
Sugar, White, Granulated	A-A-20135B, Type I, Style A, 1/7 oz.	All
Beverage Base, Powdered, Apple Cider, Sweetened with Nutritive Sweetener, Fortified with Ascorbic Acid	A-A-20098B, Type II, Flavor 12, Fortification b	C, F 2/
Tea, Instant, Regular, Sweetened with Nutrient Sweetener, Lemon	A-A-20183A, Type I, Style B, Flavor 2	B, E 2/
Chewing Gum, Tablet, Regular, Peppermint or Spearmint	A-A-20175A, Type I, Class A, Flavor 1 or 2	All
Hot Sauce, Extra Hot	A-A-20097C, Type II, 1/8 fl. oz.	All 1/
Salt, Sodium Chloride	Monograph, 4 gram	A, B, C
Hand Cleaner (Pre-Moistened Towelette)	A-A-461B, Type II	All
Toilet Tissue	A-A-59594, Style I, Type A,	
2 Packets	Class 1, Size a	A, B, C
1 Packet		D, E, F

Matches, Paper, 20 Splint Book	A-A-59489, Type I, Class A	All

1/ Alternatively, hot sauce may be packed loose in the meal bag.

2/ If apple cider (menus 7, 9) is a 17 gram package, two commercial packages are required for a 34 gram serving. Instant tea (menus 4, 6, 12) requires a minimum 14 gram commercial package.

(3) Menu contents. The menu contents shall be as specified in Table III.

TABLE III. Menu Contents

Menu #1	**Menu #2**
Spicy Oriental Chicken with Rice	Beef Stroganoff with Noodles
Fig Bar	Chocolate Sports Bar
MRE Crackers 1/	Starch Jellies
MRE Peanut Butter	Nut Raisin Mix
Cappuccino 1/	Cocoa Beverage Powder
MRE Beverage Base 1/	LRP: Accessory Pack A
LRP: Accessory Pack A	MCW: Accessory Pack D
MCW: Accessory Pack D	Spoon
Spoon	
Menu #3	**Menu #4**
Sweet & Sour Pork with Rice	Turkey Tetrazzzini
MRE Crackers 1/	Fudge Brownie
MRE Peanut Butter	MRE Crackers 1/
Soup, Noodle, Ramen, Instant 1/	MRE Cheese Spread 1/
Cappuccino 1/	Beverage Base, Orange
LRP: Accessory Pack A	LRP: Accessory Pack B
MCW: Accessory Pack D	MCW: Accessory Pack E
Spoon	Spoon
Menu #5	**Menu #6**
Chicken & Rice	Lasagna with Meat & Sauce
Soup, Noodle, Ramen, Instant 1/	Nut Raisin Mix
Chocolate Covered Cookies	Toaster Pastry
Beverage Base, Orange	Shortbread Cookies
Cocoa Beverage Powder	Cappuccino 1/
LRP: Accessory Pack A	LRP: Accessory Pack B
MCW: Accessory Pack D	MCW: Accessory Pack E
Spoon	Spoon

TABLE III. Menu Contents (cont'd)

Menu #7	**Menu #8**
Beef Stew	Spaghetti with Meat Sauce
Cake 1/	Nut Raisin Mix
Chocolate Toffee Roll	Toaster Pastry
Chocolate Covered Cookies	Chocolate Disks, Pan Coated
LRP: Accessory Pack C	Cocoa Beverage Powder
MCW: Accessory Pack F	LRP: Accessory Pack A
Spoon	MCW: Accessory Pack D
	Spoon
Menu #9	**Menu #10**
Beef Teriyaki with Rice	Scrambled Eggs with Cheese, Western style
Shortbread Cookies	Cream of Wheat Cereal 1/
MRE Crackers 1/	Chocolate Sports Bar
MRE Peanut Butter	Filled Pretzels 1/
LRP: Accessory Pack C	Beverage Base, Orange
MCW: Accessory Pack F	Cocoa Beverage Powder
Spoon	LRP: Accessory Pack A
	MCW: Accessory Pack D
	Spoon
Menu #11	**Menu #12**
Scrambled Eggs with Bacon	Scrambled Eggs with Cheese, Western Style
Oatmeal, Flavored 1/	Oatmeal, Flavored 1/
Nut Raisin Mix	Fudge Brownie
Fig Bar	Chocolate w/Peanut Butter Disks
Beverage Base, Orange	Cocoa Beverage Powder
Cocoa Beverage Powder	LRP: Accessory Pack B
LRP: Accessory Pack A	MCW: Accessory Pack E
MCW: Accessory Pack D	Spoon
Spoon	

1/ An equal quantity of at least three flavors of cakes (menu 7), two flavors of cream of wheat (menu 10), three flavors of oatmeal (menus 11, 12), two flavors of cheese (menu 4) two flavors of filled pretzels (menu 10), two flavors of soup (menu 3, 5), two flavors of crackers (menus 1, 3, 4, 9), three flavors of beverage base (menu 1) and two flavors of cappuccino (menus 1, 3, 6) will be procured and distributed in as uniform manner as possible.

SECTION D

D-1 PACKAGING

A. Components.

(1) Meal bag. The meal bag shall be made from food grade, low density polyethylene (LDPE). Polyethylene tubing shall have a minimum thickness of 0.010 inch. The inside dimensions of the bag shall not exceed 8-1/8 x 12-1/2 inches. The color of the meal bag for food packet LRP shall conform to number 20219, 30219, 30279, 30313, 30324, or 30450 of FED-STD-595, Colors Used in Government Procurement. The color of the meal bag for MCW shall conform to number 37778 to 37886 of FED-STD-595. The bag manufacturer's seal shall be a minimum of 1/8-inch wide, continuous, peelable seal that forms an hermetic closure. The seal shall be designed with an inverted "V" shaped peel indicator along the seal path (see Figures 1 and 2). The seal strength of each seal shall be not less than 4 pounds per linear inch and the peelable seal shall be not greater than 10 pounds per linear inch.

(2) Accessory packet. The accessory packet shall be a preformed pouch or a form-fill seal packet. The color of the exterior of the packet shall be clear or tan for the food packet LRP, conforming to number 20219, 30219, 30279, 30313, 30324, or 30450 of FED-STD-595, or clear or white for the MCW, conforming to number 37778 through 37886 of FED-STD-595. The packet shall be fabricated from polymeric films or film combinations with adequate strength and thickness to contain and protect the components throughout assembly and storage. The water vapor transmission rate (WVTR) of the film shall not exceed 6.2 gm/m^2/24 hrs/90%rh/100°F when tested in accordance with ASTM F 372, ASTM E 96, or Method 3030 of FED-STD-101. Dimensions shall be sufficient to contain all components and be compatible with meal bag. A tear notch or serrated edge shall be located on the outer edge of one or both side seals. The seal strength of the seals shall be not less than 3.5 pounds per linear inch.

(3) Time-temperature indicator (TTI) label. The TTI label shall be a pressure sensitive adhesive label. The TTI label shall have and activation energy (Ea) of 24 to 30 kcal/mole, shall be protected from ultraviolet radiation and shall have a shelf life of 1100 days at 80ºF as pivot point.

B. Meal bag.

(1) Menu assembly. One each of the applicable components indicated in Table I shall be inserted in the meal bag specified in D-1,A.(1). The open end of the bag shall be hermetically sealed with a heat seal not less than 1/8 inch wide. The closure seal shall have a seal strength of not less than 4 pounds per linear inch (see section E,A.(3)). The torn test samples shall be visually examined to verify the presence of a seal "witness" (a pale trace) of the cohesive bond. Any evidence of a seal witness on any of the seal strength samples shall be considered evidence that the peelable additive is present in the bag.

(2) Accessory packet assembly. One of each of the applicable components indicated in Table II shall be inserted in the accessory packet specified in D-1,A (2). When a preformed pouch is used, a minimum of 1/8 inch wide heat seal shall be applied to effect closure of the pouch. When a form-fill seal packet is used,

components shall be placed in the tray-shaped or flat sheet body and the cover applied by heat sealing. The sealed accessory packets shall not show any evidence of material degradation or delamination from packet fabrication, forming, or heat sealing. The average seal strength of the packet seals shall be not less 3.5 pounds per inch of width and no individual specimen shall have a seal strength of less than 3.0 pounds per inch width when tested in accordance with section E,A.(3).

D-2 LABELING

A. Meal bag. Each meal bag shall be printed on at least one face in dark contrasting colored permanent ink with the information contained in Figures 1 and 2.

B. Accessory packet. Accessory packet, if not of clear material, shall be printed on one side in dark contrasting colored permanent ink:

ACCESSORY PACKET

C. Shipping containers. The time-temperature indicator (TTI) shall be adhered to one of the major flaps of the box, with a 1/4 inch quiet zone around it containing no labels or marking. Identification markings shall be placed on the box end.

D-3 PACKING

A. Packing. Twelve rations, one of each menu as specified in Table III, shall be packed in a fiberboard box. The fiberboard box shall conform to style RSC, L grade V2s of ASTM D 5118, Standard Practice for Fabrication of Fiberboard Shipping Boxes. The box liner shall be a full inside width box liner fabricated from grade W5c fiberboard in accordance with ASTM D 5118, except the terminal ends of the liner shall overlap a minimum of 2 inches and no fastening of the overlap is required. Water-resistant adhesive shall be used to form the manufacturer's joint of the box . Inside box dimensions shall be 16-11/16 inches in length, 9-1/8 inches in width, and 10-1/4 inches in depth. The box shall be closed in accordance with method 2A1 of ASTM D 1974, Standard Practice for Methods of Closing, Sealing, and Reinforcing Fiberboard Shipping Containers. Boxes shall be reinforced in accordance with ASTM D 1974 with two nonmetallic straps.

D-4 UNITIZATION

A. Unit loads. Forty-eight boxes shall be arranged in unit loads in accordance with Type I, Class B of DSCP Form 3507, Loads, Unit: Preparation of Semiperishable Subsistence Items. At least two boxes in each tier shall be oriented to display the TTI label.

D-5 MARKING

A. Marking. Marking of shipping containers and unit loads shall be in accordance with DPSC Form 3556, Marking Instructions for Shipping Cases, Sacks and Palletized/Containerized Loads of Perishables and Semiperishable Subsistence.

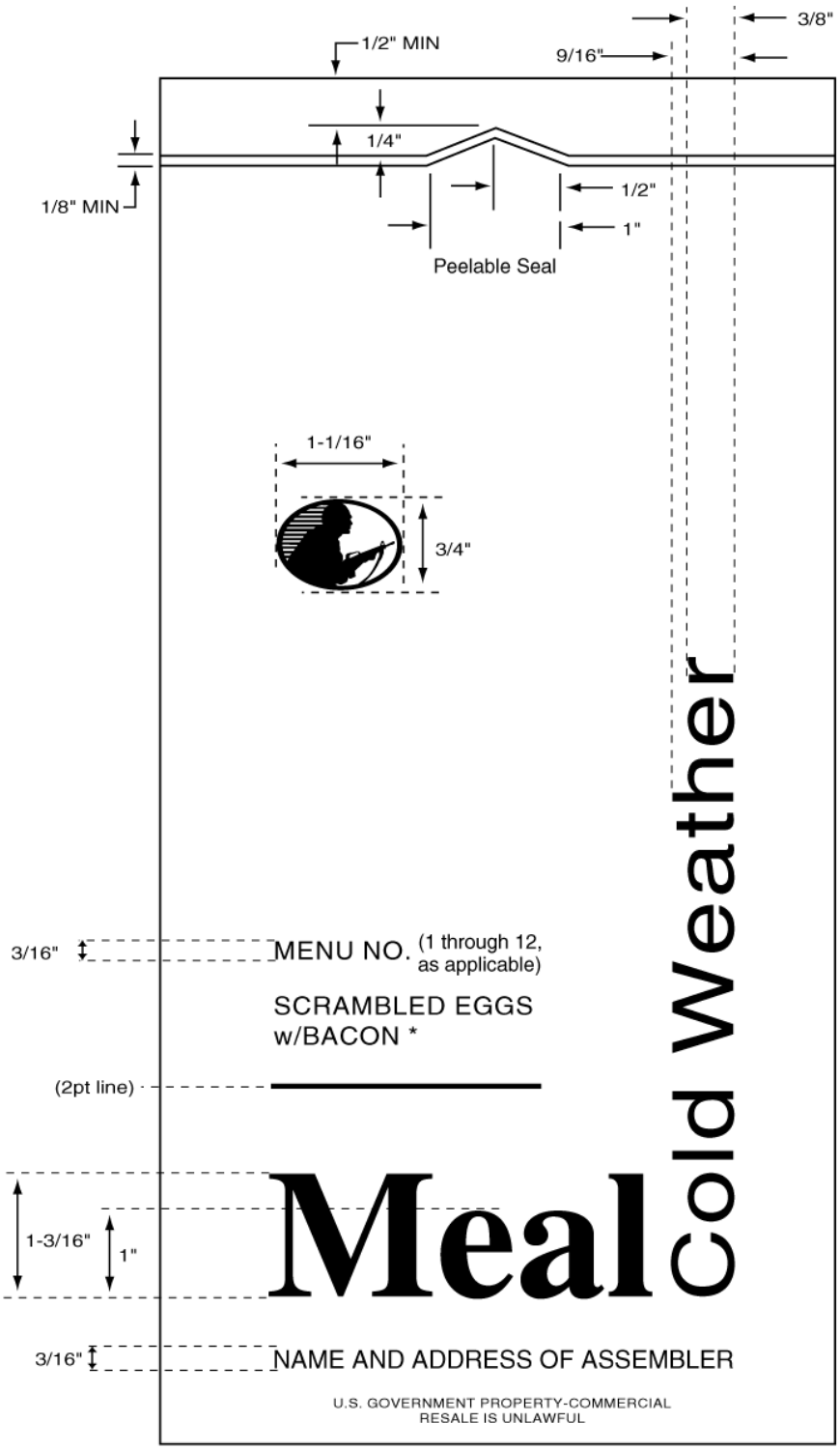

FIGURE 1. GRAPHIC DESIGN AND LETTERING HEIGHT **

* Name of applicable entree component as listed in table I component column

** A tolerance of plus or minus 1/16 inch is applicable to letter height requirements

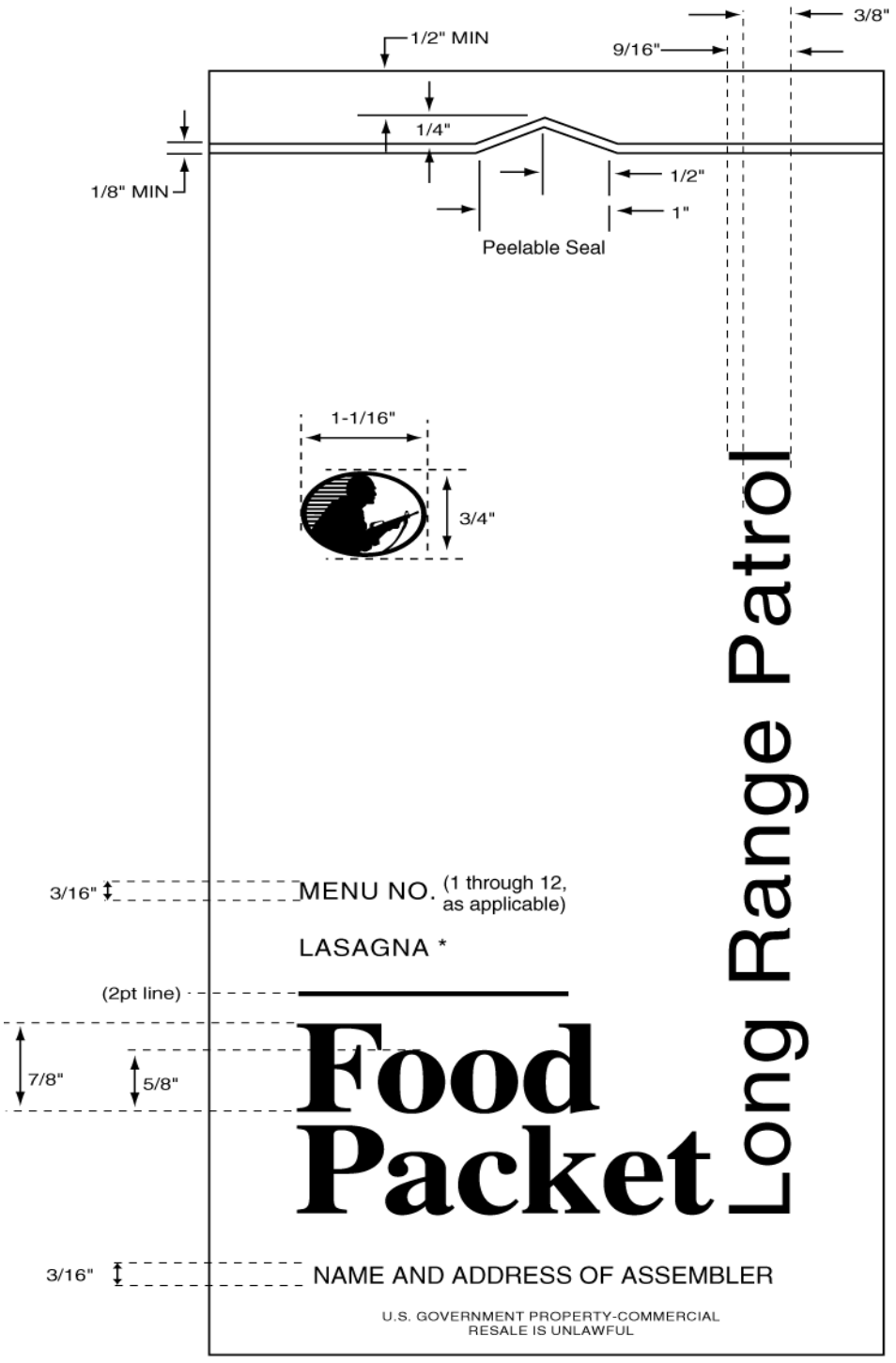

FIGURE 2. GRAPHIC DESIGN AND LETTERING HEIGHT **

* Name of applicable entree component as listed in table I component column

** A tolerance of plus or minus 1/16 inch is applicable to letter height requirements

SECTION E INSPECTION AND ACCEPTANCE

Definitions.

(1) Critical defect. A critical defect is a defect that judgment and experience indicate would result in hazardous or unsafe conditions for individuals using, maintaining, or depending on the item; or a defect that judgment and experience indicate is likely to prevent the performance of the major end item, i.e., the consumption of the ration.

(2) Major defect. A major defect is a defect, other than critical, that is likely to result in failure, or to reduce materially the usability of the unit of product for its intended purpose.

(3) Minor defect. A minor defect is a defect that is not likely to reduce materially the usability of the unit of product for its intended purpose, or is a departure from established standards having little bearing on the effective use or operation of the unit.

Quality Assurance Provisions.

The following quality assurance criteria, utilizing ANSI/ASQC Z1.4-1993, Sampling Procedures and Tables for Inspection by Attributes, are required.

A. Packaging examination.

(1) Accessory packet. Material shall be certified by a certificate of conformance or by laboratory examination. The filled and sealed packets shall be examined for the defects listed in Table IV. The lot size shall be expressed in packets. The sample unit shall be one packet. The inspection level shall be S-4 and the acceptable quality level (AQL), expressed in terms of defects per hundred units, shall be 2.5 for major defects and 4.0 for minor defects.

TABLE IV. Accessory packet defects

Category		Defect
Major	Minor	
101		Not clean. 1/
	201	Closure seal width less than 1/16 inch. 2/
	202	Tear, nick, notch, or serrations missing; or do not facilitate easy opening; or assembler's seal extends into or below tear, nick, or notch.
	203	Tear, hole, or open seal.
	204	Evidence of delamination.
	205	Labeling missing, incorrect, or illegible.
	206	Missing or unserviceable component.
	207	Foreign odor.

1/ Outer packaging shall be free from foreign matter, which is unwholesome, has the potential to cause package damage (for example, glass, metal fillings, etc.), or generally detracts from the clean appearance of the package. The following examples shall not be scored as defects for unclean:

a. Foreign matter which presents no health hazard or potential package damage and which can be readily removed by gently shaking the package or by gently brushing the package with a clean dry cloth.

b. Localized dried product which affects less than 1/8 of the total surface area of one pouch face, or an aggregate of scattered dried product which affects less than 1/4 of the total surface area of one pouch face.

2/ An effective seal is defined as any uncontaminated, fusion bonded, continuous path, minimum 1/16 inch wide, producing a hermetically sealed pouch.

(2) Assembled meal bag examination. Material shall be certified by a certificate of conformance or by laboratory examination. The filled and sealed meal bags shall be externally inspected and then opened and the components inspected for the defects listed in Table V. The lot size shall be expressed in bags. The sample unit shall be one bag. The inspection level shall be S-4 and the AQL, expressed in terms of defects per hundred units, shall be 2.5 for major defects and 4.0 for minor defects. A minimum of 50 samples shall be examined for critical defects. The finding of any critical defect shall be cause for rejection of the lot.

TABLE V. Assembled meal bag defects

Category			Defect
Critical	Major	Minor	
1			Tear, hole, or puncture in cheese spread.
2			Swollen cheese spread pouch.
	101		Menu component missing or incorrect assortment for menu package. 1/
	102		Not clean, the meal bag or any of the outer packaging of its contents. 2/
	103		Foreign odor.
	104		Labeling missing, incorrect, or illegible.
	105		Tear, hole, puncture, or open seal in component packages.
	106		Loss of vacuum in vacuum packaged components. 3/
	107		Crushed or broken component.
	108		Broken spoon.
	109		Candy not in barrier pouch.
		201	Tear, hole, open seal, or split in meal bag.
		202	Tear, hole, puncture, or open seal in accessory packet bag.
		203	Inverted "V" shaped peel indicator missing or not located as specified.
		204	Color, when used, incorrect.

1/ Hot sauce shall be either loose in meal bag or packed in the accessory packet.

2/ Outer packaging shall be free from foreign matter, which is unwholesome, has the potential to cause package damage (i.e. glass, metal filings, etc.), or generally detracts from the clean appearance of the package. The following examples shall not be scored as defects for unclean:

a. Foreign matter which presents no health hazard or potential package damage and which can be readily removed by gently shaking the package or by gently brushing the package with a clean dry cloth.

b. Localized dried product which affects less than 1/8 of the total surface area of one pouch face, or an aggregate of scattered dried product which affects less than 1/4 of the total surface area of one pouch face.

3/ When vacuum retention cannot be determined visually by obvious cling of the bag walls to the contents, retention shall be verified by testing as specified in the Packaging Requirements and Quality Assurance Provisions for Dehydrated Product in a Brickpack Pouch.

(3) Seal testing. The pouch seals shall be tested for seal strength or internal pressure resistance as required in a, b, c, or d, as applicable.

a. Unfilled preformed subassembly packet/accessory packet pouch. The seals of the unfilled preformed pouches for the subassembly packet/accessory packet shall be tested for seal strength in accordance with ASTM F 88, Seal Strength of Flexible Barrier Materials. The lot size shall be expressed in pouches. The sample unit shall be one pouch. The inspection shall be level S-1 and the AQL, expressed in defects per hundred units, shall be 10.0. Three specimens shall be cut from each of the three sealed sides of each pouch in the sample. The average seal strength of any side shall be calculated by averaging the results of the three specimens cut from that side. Any test specimen failing to meet a seal strength of 3 pounds per inch of width shall be scored as a major defect. Any average seal strength of less than 3.5 pounds per inch of width shall be cause for rejection of the lot. Alternatively, the internal pressure resistance shall be determined by pressurizing the pouches while they are restrained between two rigid plates. The sample size shall be the number of pouches indicated by inspection level S-1. If a three seal tester (one that pressurizes the pouch through an open end) is used, the closure seal shall be cut off for testing the side and bottom seals of the pouch. For testing the closure seal, the bottom seal shall be cut off. The pouches shall be emptied prior to testing. If a four-seal tester (designed to pressurize filled pouches by use of a hypodermic needle through the pouch wall) is used, all four seals can be tested simultaneously. The distance between rigid restraining plates on the four-seal tester shall be equal to the thickness of the product +1/16 inch. Pressure shall be applied at the approximate uniform rate of 1 pound per square inch gage (psig) per second until 14 psig pressure is reached. The 14 psig pressure shall be held constant for 30 seconds and then released. The pouches shall then be examined for separation or yield of the heat seals. Any rupture of the pouch or evidence of seal separation greater than 1/16 inch in the pouch manufacturer's seal shall be considered a test failure. Any seal separation that reduces the effective closure seal width to less than 1/16 inch (see table IV, footnote 2/) shall be considered a test failure. Any test failure shall be cause for rejection of the lot.

b. Unfilled meal bag. The seals of the unfilled meal bags shall be tested for seal strength in accordance with ASTM F 88. The lot size shall be expressed in bags. The sample unit shall be one bag. The sample size shall be the number of bags indicated by inspection level S-1. Three specimens shall be cut from the sealed end of each bag in the sample. Samples shall not be taken from the inverted "V" peel initiation. Any specimen with a seal strength less than 4 pounds per inch of width or greater than 10 pounds per inch of width shall be cause for rejection of the lot.

c. Subassembly packet/accessory packet pouch closure. The closure seals of the pouches for the subassembly packet/accessory packet shall be tested for seal strength in accordance with ASTM F 88. The lot size shall be expressed in pouches. The sample unit shall be one pouch. The inspection level shall be S-1 and the AQL, expressed in defects per hundred units, shall be 10.0. For the closure seal on preformed pouches, three adjacent specimens shall be cut from the closure seal of each pouch in the sample. For the form-fill-seal pouches, three specimens shall be cut from each side and each end of each pouch in the sample. The average

seal strength of any side, end or closure shall be calculated by averaging the three specimens cut from that side, end or closure. Any test specimen failing to meet a seal strength of 3 pounds per inch of width shall be scored as a major defect. Any average seal strength of less than 3.5 pounds per inch of width shall be cause for rejection of the lot. Alternatively, the internal pressure resistance shall be determined by pressurizing the pouches while they are restrained between two rigid plates. The sample size shall be the number of pouches indicated by inspection level S-1. If a three seal tester (one that pressurizes the pouch through an open end) is used, the closure seal shall be cut off for testing the side and bottom seals of the pouch. For testing the closure seal, the bottom seal shall be cut off. The pouches shall be emptied prior to testing. If a four-seal tester (designed to pressurize filled pouches by use of a hypodermic needle through the pouch wall) is used, all four seals can be tested simultaneously. The distance between rigid restraining plates on the four-seal tester shall be equal to the thickness of the product +1/16 inch. Pressure shall be applied at the approximate uniform rate of 1 pound per square inch gage (psig) per second until 14 psig pressure is reached. The 14 psig pressure shall be held constant for 30 seconds and then released. The pouches shall then be examined for separation or yield of the heat seals. Any rupture of the pouch or evidence of seal separation greater than 1/16 inch in the pouch manufacturer's seal shall be considered a test failure. Any seal separation that reduces the effective closure seal width to less than 1/16 inch (see table IV, footnote 2/) shall be considered a test failure. Any test failure shall be cause for rejection of the lot.

d. Meal bag closure. The closure seals of the meal bags shall be tested for seal strength in accordance with ASTM F 88. The lot size shall be expressed in bags. The sample unit shall be one bag. The sample size shall be the number of bags indicated by inspection level S-1. Three specimens shall be cut from the closure seal of each bag in the sample. Any specimen with a seal strength less than 4 pounds per inch of width shall be cause for rejection of the lot.

(4) Unfilled meal bag and unfilled preformed subassembly packet/accessory packet pouch seal certification. A certificate of conformance may be accepted as evidence that unfilled bags or pouches conform to the seal strength requirements specified in D-1,A,(1) and (3). When deemed necessary by the USDA, seal testing of the unfilled bags or pouches shall be as specified in E,A,(3), a and b.

B. Packing.

(1) Shipping container examination. The filled and closed shipping container shall be examined for the defects listed in Table VI. The lot size shall be expressed in shipping containers. The sample unit shall be one shipping container fully packed. The inspection level shall be S-3 and the AQL, expressed in terms of defects per hundred units, shall be 4.0 for major defects and 10.0 for total defects.

TABLE VI. Shipping container defects

Category		Defect
Major	Minor	
101		Marking missing, incorrect or illegible.
102		Missing ration.
103		Not one of each menu specified.

201 Not packaged or arranged as specified.

202 Time-temperature indicator missing or not located as specified.

SECTION J REFERENCE DOCUMENTS

DPSC FORMS

DPSC FORM 3556	Marking Instructions for Shipping Cases, Sacks and Palletized/Containerized Loads of Perishable and Semiperishable Subsistence

FEDERAL STANDARD

FED-STD-101	Test Procedures for Packaging Materials
FED-STD-595	Colors Used in Government Procurement

NON-GOVERNMENTAL STANDARDS

AMERICAN SOCIETY FOR QUALITY CONTROL (ASQC)

ANSI/ASQCZ1.4-1993 Sampling Procedures and Tables for Inspection by Attributes

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

D 1974	Standard Practice for Methods of Closing, Sealing, and Reinforcing Fiberboard Shipping Containers
D 5118	Standard Practice for Fabrication of Fiberboard Shipping Boxes
E 96	Standard Test Methods for Water Vapor Transmission of Materials
F 88	Seal Strength of Flexible Barrier Materials
F 372	Standard Test Method for Water Vapor Transmission of Flexible Barrier Materials Using and Infrared Detection Technique

AOAC Official Methods of Analysis of the AOAC International

INTERNATIONAL

TO AMSSB-RCF-F(N) (MacDonald/5186) 18 March 2003

TO: DSCP-HRUT (Kavanagh)

SUBJECT: (ES03-143, ES03-148, ES03-149) Review of Bid Qualifications: DSCP Case DSCP-SS-03-04972, Ameriqual Bid Qualification; DSCP Case DSCP-SS-03-05054, Wornick Bid Qualification; DSCP Case DSCP-SS-03-05056, Sopakco Bid Qualification; Contract SPO300-03-R-7059; Meal, Cold Weather, Food Packet Long Range Patrol

1. Date received: 2 July 2003
Date due: 17 July 2003
Date replied: 18 July 2003 (Kavanagh)

2. Reference:

a. DSCP Case DSCP-SS-03-04972; Ameriqual Bid Qualification
b. DSCP Case DSCP-SS-03-05054; Wornick Bid Qualification
c. DSCP Case DSCP-SS-03-05056; Sopakco Bid Qualification

3. Per reference 2a, of this message (qualification item #3). A review of changes sent to DSCP 17 February 2000 on all entrée products indicate that changes in analytical requirements for fat and sodium, deleting requirements for sieve testing and adjustments in net weight requirements were all made and "provided to the subject documents for all current and future procurements until the document is formally amended." These cover; PCR-B-015, Beef Stew (DDC-00-041N); PCR- C-025, Chicken and Rice (DDC-00-044N); PCR-L-001, Lasagna with Meat and Sauce (DDC-00-047N); PCR-B-016, Beef Stroganoff with Noodles (DDC-00-042N); PCR-C-026, Chicken, Spicy Oriental with Rice (DDC-00-045N); PCR-P-010, Pork, Sweet and Sour (DDC-00-048N); PCR-T-002, Turkey Tetrazzini, (DDC-00-050N); PCR-S-008, Spaghetti with Meat Sauce, (DDC-00-049N); PCR-B-017, Beef Teriyaki with Rice, (DDC-00-043N) and were part of Amendment 0002 dated 4/4/00. Amendment 003 covering similar changes for PCR-E-001, Eggs Scrambled were also to be applied to "current and future procurements" and were covered by change dated 18 February 2000 (DDC-00-046N).

4. In addition to paragraph 3 above, a review of the file on PCR-E-001 indicated another important change made 9 November 2000, ES01-008, DSCP# 1-R-033-00 that covered important changes to the label for the eggs in the Packaging Requirements and Quality Assurance Provisions for Dehydrated Product in Brickpack Pouch. Briefly it corrected the water addition from 16 ounces to 8 ounces for the egg items. Also in that memo were changes directly to PCR-E-001 covering sieve percentages in section E-6, B, Table I, defects 206, 207, and 208. These changes also were provided for current, pending and future procurements until the document is formally amended or revised.

5. Per reference 2a, of this message (qualification item #4) Qualification #4 is not in Natick jurisdiction; inspection of military ration components is done through an overarching agreement between DSCP and the USDA.

6. Per reference 2a, of this message (qualification items #5 thru #9) The Natick Soldier Center (NSC) concurs

with Ameriquals Bid Qualification items 5 thru 9 only. Changes are provided in paragraph 11 of this message.

7. Per reference 2b, of this message (qualification item #1). NSC concurs with Wornick's request to update Table II (accessory packet components), changes were provided on 21 March 2003. However, additional minor changes are provided in paragraph 11 of this message.

8. Per reference 2b, of this message (qualification item #2). NSC concurs with Wornick's request for instant tea packet size and changes are provided in paragraph 11 of this message. The product that has been procured lately has been a 17-gram commercial product. The Quality Assurance Provisions and Packaging Requirements for CID A-A-20183A, Tea, Instant dated 31 January 2000 states "Not less than 14 grams of instant tea shall be filled into an envelope ---" in section D-1, A. The 17-gram product meets this requirement.

9. Per reference 2b, of this message (qualification item #4). NSC does not concur with using the draft for Proposed CID for Cereal, Rolled Oats dated April 21, 2003 A-A-20090C. This document has not been fully coordinated and in particular the change to the fiber requirement needs to be reviewed by oatmeal suppliers. The apparent increase in allowable fiber may not be an actual increase in that the original requirement for 1.8% "crude" fiber and the proposed change to the document will convert the fiber to "insoluble" fiber. Until the new document is finalized it should not be used in procurement.

10. Per reference 2c of this message, Sopakco Bid Qualification. NSC does not concur with the use of only one flavor of instant oatmeal for MCW/LRP Assembly. This restricted calorie ration has twelve menus which includes only three breakfast menus. The oatmeal is considered an entrée component. A primary issue of operational rations is providing the variety, which has been shown to impact calorie consumption. The instant oatmeal itself is a relatively simple product and although the packaging would require a different name on the label the cost has been assumed in past productions to insure variety.

11. The following changes to subject document are provided for all current, pending and future procurements of ACR-M-001.

Page 3
Table II, line 15, after "Salt" insert ", Sodium Chloride".

Line 17, delete "Paper" and insert "Tissue".

Page 4
Footnote 2/, line 2: Delete "17 gram" and insert "minimum 14 gram".

Page 6
Paragraph D-1,A(2), line 8, delete "The dimensions…7-3/8 inches." and insert "Dimensions shall be sufficient to contain all components and be compatible with meal bag."

Page 7
D-4, line 1, after "arranged" delete remainder of paragraph and insert "in unit loads in accordance with Type I, Class B of DSCP Form 3507, Loads, Unit: Preparation of Semiperishable Subsistence Items. At least two boxes in each tier shall be oriented to display the TTI label."

Page 11
Table IV, defect 201, delete "Effective…point." And insert "Closure seal width less than 1/16 inch. 2/"

Defect 203, delete in its entirety.

Add new footnote: "2/ An effective seal is defined as any uncontaminated, fusion bonded, continuous path, minimum 1/16 inch wide, producing a hermetically sealed pouch."

Page 12
Defect 104, delete "Meal bag or component".

Defect 201, delete in its entirety.

Page 13
Delete paragraph "(3)" in its entirety and substitute:

"(3) Seal testing. The pouch seals shall be tested for seal strength or internal pressure resistance as required in a, b, c, or d, as applicable.

a. Unfilled preformed subassembly packet/accessory packet pouch. The seals of the unfilled preformed pouches for the subassembly packet/accessory packet shall be tested for seal strength in accordance with ASTM F 88, Seal Strength of Flexible Barrier Materials. The lot size shall be expressed in pouches. The sample unit shall be one pouch. The inspection shall be level S-1 and the AQL, expressed in defects per hundred units, shall be 10.0. Three specimens shall be cut from each of the three sealed sides of each pouch in the sample. The average seal strength of any side shall be calculated by averaging the results of the three specimens cut from that side. Any test specimen failing to meet a seal strength of 3 pounds per inch of width shall be scored as a major defect. Any average seal strength of less than 3.5 pounds per inch of width shall be cause for rejection of the lot. Alternatively, the internal pressure resistance shall be determined by pressurizing the pouches while they are restrained between two rigid plates. The sample size shall be the number of pouches indicated by inspection level S-1. If a three seal tester (one that pressurizes the pouch through an open end) is used, the closure seal shall be cut off for testing the side and bottom seals of the pouch. For testing the closure seal, the bottom seal shall be cut off. The pouches shall be emptied prior to testing. If a four-seal tester (designed to pressurize filled pouches by use of a hypodermic needle through the pouch wall) is used, all four seals can be tested simultaneously. The distance between rigid restraining plates on the four-seal tester shall be equal to the thickness of the product +1/16 inch. Pressure shall be applied at the approximate uniform rate of 1 pound per square inch gage (psig) per second until 14 psig pressure is reached. The 14 psig pressure shall be held constant for 30 seconds and then released. The pouches shall then be examined for separation or yield of the heat seals. Any rupture of the pouch or evidence of seal separation greater than 1/16 inch in the pouch manufacturer's seal shall be considered a test failure. Any seal separation that reduces the effective closure seal width to less than 1/16 inch (see table IV, footnote 2/) shall be considered a test failure. Any test failure shall be cause for rejection of the lot.

b. Unfilled meal bag. The seals of the unfilled meal bags shall be tested for seal strength in accordance with ASTM F 88. The lot size shall be expressed in bags. The sample unit shall be one bag. The sample size shall be the number of bags indicated by inspection level S-1. Three specimens shall be cut from the sealed end of each bag in the sample. Samples shall not be taken from the inverted "V" peel initiation. Any

specimen with a seal strength less than 4 pounds per inch of width or greater than 10 pounds per inch of width shall be cause for rejection of the lot.

c. Subassembly packet/accessory packet pouch closure. The closure seals of the pouches for the subassembly packet/accessory packet shall be tested for seal strength in accordance with ASTM F 88. The lot size shall be expressed in pouches. The sample unit shall be one pouch. The inspection level shall be S-1 and the AQL, expressed in defects per hundred units, shall be 10.0. For the closure seal on preformed pouches, three adjacent specimens shall be cut from the closure seal of each pouch in the sample. For the form-fill-seal pouches, three specimens shall be cut from each side and each end of each pouch in the sample. The average seal strength of any side, end or closure shall be calculated by averaging the three specimens cut from that side, end or closure. Any test specimen failing to meet a seal strength of 3 pounds per inch of width shall be scored as a major defect. Any average seal strength of less than 3.5 pounds per inch of width shall be cause for rejection of the lot. Alternatively, the internal pressure resistance shall be determined by pressurizing the pouches while they are restrained between two rigid plates. The sample size shall be the number of pouches indicated by inspection level S-1. If a three seal tester (one that pressurizes the pouch through an open end) is used, the closure seal shall be cut off for testing the side and bottom seals of the pouch. For testing the closure seal, the bottom seal shall be cut off. The pouches shall be emptied prior to testing. If a four-seal tester (designed to pressurize filled pouches by use of a hypodermic needle through the pouch wall) is used, all four seals can be tested simultaneously. The distance between rigid restraining plates on the four-seal tester shall be equal to the thickness of the product +1/16 inch. Pressure shall be applied at the approximate uniform rate of 1 pound per square inch gage (psig) per second until 14 psig pressure is reached. The 14 psig pressure shall be held constant for 30 seconds and then released. The pouches shall then be examined for separation or yield of the heat seals. Any rupture of the pouch or evidence of seal separation greater than 1/16 inch in the pouch manufacturer's seal shall be considered a test failure. Any seal separation that reduces the effective closure seal width to less than 1/16 inch (see table IV, footnote 2/) shall be considered a test failure. Any test failure shall be cause for rejection of the lot.

d. Meal bag closure. The closure seals of the meal bags shall be tested for seal strength in accordance with ASTM F 88. The lot size shall be expressed in bags. The sample unit shall be one bag. The sample size shall be the number of bags indicated by inspection level S-1. Three specimens shall be cut from the closure seal of each bag in the sample. Any specimen with a seal strength less than 4 pounds per inch of width shall be cause for rejection of the lot.

(4) Unfilled meal bag and unfilled preformed subassembly packet/accessory packet pouch seal certification. A certificate of conformance may be accepted as evidence that unfilled bags or pouches conform to the seal strength requirements specified in D-1,A,(1) and (3). When deemed necessary by the USDA, seal testing of the unfilled bags or pouches shall be as specified in E,A,(3), a and b."

4. The POC for this action is Mrs. Karen MacDonald, X-5186.

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Team Leader
Food Engineering Services Team

ACR-M-001
09 July 1999
W/CHANGE 10 18July 2003

DoD Combat Feeding Directorate

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